

MONTHLY WEATHER REVIEW

Editor: Prof. CLEVELAND ABBE.

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INTRODUCTION.

The MONTHLY WEATHER REVIEW for January, 1900, is based on reports from about 3,103 stations furnished by paid and voluntary observers, classified as follows: regular stations of the Weather Bureau, 158; West Indian service stations, 12; special river stations, 132; special rainfall stations, 48; voluntary observers of the Weather Bureau, 2,562; Army post hospital reports, 27; United States Life-Saving Service, 9; Southern Pacific Railway Company, 96; Canadian Meteorological Service, 32; Mexican Telegraph Service, 20; Mexican voluntary stations, 7. International simultaneous observations are received from a few stations and used, together with trustworthy newspaper extracts and special reports.

Special acknowledgment is made of the hearty cooperation of Prof. R. F. Stupart, Director of the Meteorological Service of the Dominion of Canada; Mr. Curtis J. Lyons, Meteorologist to the Hawaiian Government Survey, Honolulu; Señor Manuel E. Pastrana, Director of the Central Meteorological and Magnetic Observatory of Mexico; Señor A. M. Chaves, Director-General of Mexican Telegraphs; Mr. Maxwell Hall,

Government Meteorologist, Kingston, Jamaica; Capt. S. I. Kimball, Superintendent of the United States Life-Saving Service; and Capt. J. E. Craig, Hydrographer, United States Navy.

The REVIEW is prepared under the general editorial supervision of Prof. Cleveland Abbe.

Attention is called to the fact that the clocks and self-registers at regular Weather Bureau stations are all set to seventy-fifth meridian or eastern standard time, which is exactly five hours behind Greenwich time; as far as practicable, only this standard of time is used in the text of the REVIEW, since all Weather Bureau observations are required to be taken and recorded by it. The standards used by the public in the United States and Canada and by the voluntary observers are believed to conform generally to the modern international system of standard meridians, one hour apart, beginning with Greenwich. Records of miscellaneous phenomena that are reported occasionally in other standards of time by voluntary observers or newspaper correspondents are sometimes corrected to agree with the eastern standard; otherwise, the local meridian is mentioned.

FORECASTS AND WARNINGS.

By Prof. E. B. GARRIOTT, in charge of Forecast Division.

The month of December, 1899, closed cold in all districts east of the Rocky Mountains and the temperature continued abnormally low over the Southern and Eastern States during the first three days of January, 1900. On the morning of January 2 the line of freezing temperature was traced over the middle and east Gulf coasts and to Tampa, Fla., and the average fall in temperature over the Florida Peninsula during the preceding twenty-four hours had averaged 16°. As existing conditions indicated a still further fall in temperature, warning was given in the morning forecast of the 2d that heavy frost and freezing weather would occur in eastern Florida, except in the extreme southern portion, the night of the 2d. The morning reports of the 3d showed light frost as far south as Jupiter, Fla., and minimum temperature, 28°, at Tampa, and 22°, at Jacksonville, Fla.

From the 4th to the 23d unusually mild weather prevailed in the United States, and during this period a number of special advices and forecasts of continued moderate temperature were issued in the interest of shippers of perishable goods.

From the 24th to the close of the month a succession of cold waves crossed the Northwestern States, and during the 29th and 30th the minimum temperatures of this period were

experienced in the Gulf and South Atlantic States, with freezing weather as far south as Tampa, the morning of the 30th.

Following a season of prevailing moderate weather the cold waves of the last week of January were severely felt, and the cold-wave signals that were displayed, and the special warnings that were issued, well in advance of their arrival, prevented the loss of valuable perishable property and goods in the central and northern districts, and enabled vegetable and fruit growers of the Southern States to adopt measures of protection which saved crops valued at thousands of dollars.

High winds and heavy rains prevailed in the north Pacific coast States during the first week of the month, and continued heavy rains and mild weather during the first half of the month caused floods in the rivers and streams of the middle and north Pacific coast States.

Severe gales visited the Great Lakes on the 7th, and during the night of the 24th and the day of the 25th. High winds and snow continued along the New England coast during the 1st, and strong gales prevailed on the north Atlantic coast on the 7th and 8th. During the 10th and 11th heavy rain in the middle and west Gulf States, the Ohio Valley, and Middle and South Atlantic States attended the advance of a disturbance from the west part of the Gulf of Mexico northeastward over the Ohio Valley. During the last ten days of the month several severe storms swept over the Atlantic coast districts.

Ample warnings were issued well in advance of all the severe storms of the month.